



## Synonym

NGF,NGFB,Beta-NGF,HSAN5,MGC161426,MGC161428

## Source

Human Beta-NGF Protein, premium grade(BEF-H5214) is expressed from human 293 cells (HEK293). It contains AA Ser 122 - Ala 241 (Accession # [P01138](#) ).

Predicted N-terminus: Ser 122

*It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.*

## Molecular Characterization

**Beta-NGF(Ser 122 - Ala 241)  
P01138**

This protein carries no "tag".

The protein has a calculated MW of 13.5 kDa. The protein migrates as 14-15 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 0.01 EU per µg by the LAL method.

## Sterility

The sterility testing was performed by membrane filtration method.

## Mycoplasma

Negative.

## Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22 µm filtered solution in 20 mM NaAC, 150 mM NaCl, pH5.5 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

## Storage

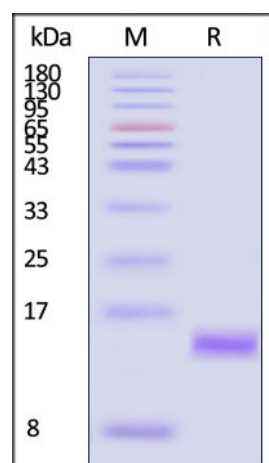
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

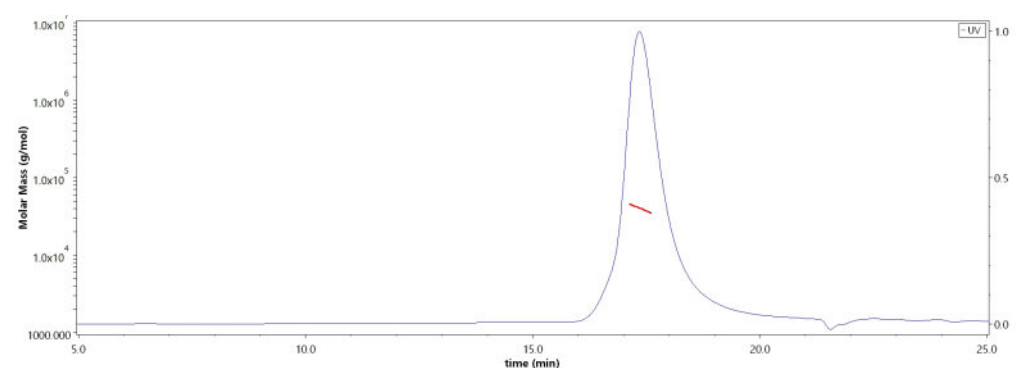
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



Human Beta-NGF Protein, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

## SEC-MALS



The purity of Human Beta-NGF Protein, premium grade (Cat. No. BEF-H5214) is more than 90% and the molecular weight of this protein is around 32-50 kDa verified by SEC-MALS.

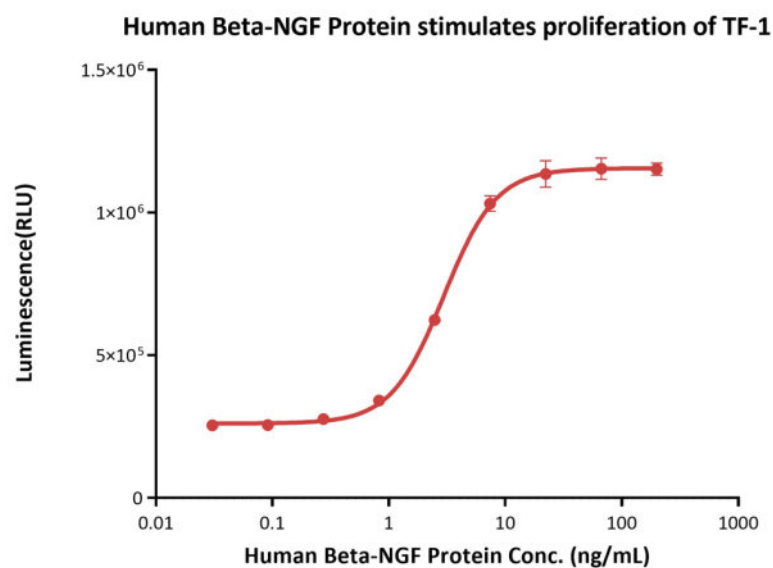
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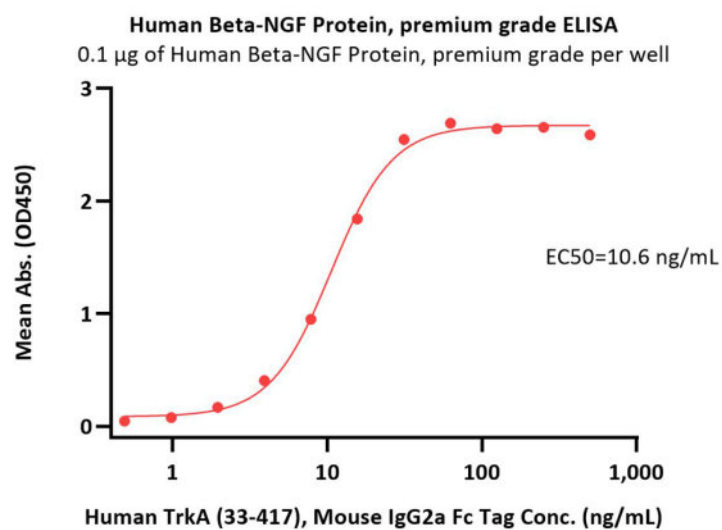


**Bioactivity-Bioactivity CELL BASE**

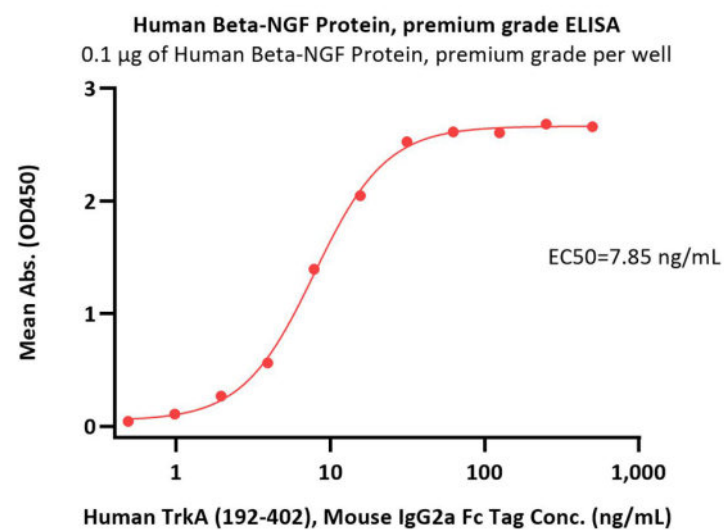


Human Beta-NGF Protein, premium grade (Cat. No. BEF-H5214) stimulates proliferation of TF-1 cells. The EC50 for this effect is 2.963 ng/mL (QC tested).

**Bioactivity-ELISA**



Immobilized Human Beta-NGF Protein, premium grade (Cat. No. BEF-H5214) at 1 µg/mL (100 µL/well) can bind Human TrkA (33-417), Mouse IgG2a Fc Tag (Cat. No. TRA-H5259) with a linear range of 1-16 ng/mL (QC tested).



Immobilized Human Beta-NGF Protein, premium grade (Cat. No. BEF-H5214) at 1 µg/mL (100 µL/well) can bind Human TrkA (192-402), Mouse IgG2a Fc Tag (Cat. No. TRA-H5253) with a linear range of 1-16 ng/mL (Routinely tested).

**Background**

Nerve growth factor beta (beta-NGF) is a neurotrophic factor that plays critical role in the development and maintenance of sensory and sympathetic neurons. The active form of human beta-NGF is is a noncovalently disulfide-linked homodimer, which is secreted and signals through the low affinity nerve growth factor receptor (LNGFR) and the tropomyosin receptor kinase A (TrkA) to activate PI3K, Ras, and PLC signaling pathways.

**Clinical and Translational Updates**

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.

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